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ABSTRACT

Three theoretical perspectives can be considered to ground the conceptualization of the use of student electronic portfolios. These include the Student Integration Model of V. Tinto (1987), the Theory of Involvement of A. Astin (1985), and the Innovation Design Theory of E. Rogers (1995). The use of portfolios moves the learning process from a teacher centered to a learner centered environment in which the student reflects on the process. Administrators will find student electronic portfolios helpful in the process of accreditation, and faculty members can use portfolios as tools for aligning teaching styles with learning styles for maximizing learning. Employers will also find portfolios useful in making decisions about hiring. (SLD)

# From Product to Process: Enhancing Learning through the Use of Student Electronic Portfolios

By

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## **From Product to Process: Enhancing Learning through the Use of Student Electronic Portfolios**

By: Terheggen, S.L., Prabhu, R.P., & Lubinescu, E.S.  
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### **Problem Statement**

Despite a significant amount of research on learning outcomes, little research focuses on the importance of the process in producing effective learning. Assessment efforts are concerned with goals developed by institutions and the efforts and accomplishments made by meeting those goals. Such questions are asked as: What goals do individual students have for themselves? How can they assess whether they have achieved them? How do these goals relate to the institutional goals? Electronic portfolios provide a venue in which to answer these questions. Stiggins (1994) defines a portfolio as "a collection of student work assembled to demonstrate student achievement or improvement". Student electronic portfolios provide a wealth of advantages including, diagnosis of student learning, grading considerations, proficiency testing, program or curriculum evaluation, research, accountability, instructional improvement, and a genuine concern for student learning. With the increasing concerns about student learning outcomes, accreditation, and accountability to external constituents, research on the implications of an electronic portfolio will provide higher education with knowledge as to its usefulness and possible need for implementation.

### **Theoretical Perspectives**

Three theoretical perspectives can be considered to ground the conceptualization of the use of student electronic portfolios. These bodies of literature include Tinto's Student Integration model, Astin's Theory of Involvement, and Roger's Innovation Decision Theory.

### **Tinto's Student Integration Model**

Tinto's model of student integration (1987) posits that the quality of a student's interaction with the institution, both socially and academically, determines a student's persistence. In this model, the greater is the social and academic integration that occurs for the student, the higher the chance for persistence. To use this model as a foundation, the opportunity for students to engage in an electronic learning portfolio would enhance academic and social integration. We propose the student will feel more connected with the institution, their activities, and their own learning process, which will further increase persistence rates. Tinto's model helps us to understand that a student comes into an institution with background characteristics, including skills, abilities, prior schooling, and family background. These characteristics affect a student's engagement in their external environment. Given the opportunity to reflect on their own educational path, a student, regardless of background characteristics, can focus on their individual growth and progress.

### **Astin's Involvement**

The effectiveness of student electronic portfolios in enhancing the learning experience depends on the level of involvement and ownership demonstrated by the student. The theory of involvement proposed by Astin (1985), places involvement at the heart of the learning process. In his view, learning occurs as students become involved. Among his five postulates of involvement, he proposes that learning is directly proportional to the quality and quantity of involvement. The onus is on the student to make the best use of available opportunities. With the implementation of student electronic portfolios, institutions of higher education can send out a clear message about the importance of the role of the student in the learning process. The role of the students change from being passive observers to active participants who are instrumental in shaping their own learning.

### **Roger's Innovation Decision Theory**

For student electronic portfolios to be successful, the institution must embrace the concept of learning as a process. Rogers (1995) Innovation Decision Process theory adds to our understanding of how the use of these portfolios can be diffused throughout an institution. Rogers postulates that diffusion is a process that occurs over time. The process consists of five distinct stages: Knowledge, Persuasion, Decision, Implementation, and Confirmation. One of the major goals in applying diffusion theory focuses on reforming and restructuring educational institutions (Rogers, 1995). Professionals of higher education around the country are beginning to assess the crucial role of student-centered learning within the boundaries of their institutions. It is becoming increasingly important for accountability, learning outcomes, accreditation, and legislative funding. According to diffusion theory, "potential adopters of an innovation (in this case: institutions) must learn about the innovation (student portfolios), be persuaded as to the merits of the innovation (accountability, student-centered), decide to adopt, implement the innovation, and confirm (reaffirm or reject) the decision to adopt the innovation" (Rogers, 1995). Technology is moving our society forward and curriculum is quickly changing as a result. Research can provide further knowledge as to the benefits and/or demerits of initiating a change such as student electronic portfolios.

### **Conclusion**

This paper seeks to understand the various ways in which the learning process can be enhanced through the use of student electronic portfolios. The use of portfolios moves the learning process from a teacher centered to a learner centered environment where the student reflects on the process. Meaningful change and development occur through participation in the process of learning. We can use the concept of "reflexivity" which is understood as a means of "bending back on itself" (Mead, 1962). This is a circular process by which an individual turns to past experiences to inform one's self. In addition to enhancing the learning process, student portfolios can assist a variety of key stakeholders. Administrators will find student electronic portfolios helpful in the process of accreditation where the focus has moved from standardization to outcomes assessment. Faculty members can use this as a tool for aligning teaching styles with learning styles for maximizing learning. Employers can use these portfolios to make informed decisions about hiring new employees. The use of student electronic portfolios can assist institutions

of higher education in demonstrating outcomes and exhibiting concern for the learning process.

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